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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,266

05/16/2005

Hiroshi Watanabe

MAT-8684US

3761

23122 7590 10/28/2009
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EXAMINER

SCHATZ, CHRISTOPHER T

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

10/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/535,266	Applicant(s) WATANABE, HIROSHI	
	Examiner CHRISTOPHER SCHATZ	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 13, 14 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 19 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 13, 14 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 now requires that a bulging out portion of the adhesive be formed and that a groove be formed around the holding plate such that adhesive flows into the groove such that said adhesive is prevented from hanging out. The specification as originally filed does not have support for such a method. The examiner appreciates that the specification as originally filed supports a method comprising forming a bulging out portion from between the panel and the holding plate. The specification as originally filed also supports a method wherein a groove is formed as claimed and adhesive flows into said groove to prevent said adhesive from hanging outside the holding plates (sections 0044-0045 of applicant's PG Pub No. 2006/0005922; figures 6A and 6B). However, the specification as originally filed does not support a method wherein both a groove that adhesive flows into is

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formed and a bulging-out portion is formed. In other words, based on the original specification, the applicant only has support to claim a method wherein a bulging out portion is formed or a method wherein a groove that adhesive flows into is formed but not method wherein both are formed.

Additionally, the specification as originally filed does not support a method of applying heat and pressure for forming a bulging out portion. The specification discloses that heat and pressure are used to cure the adhesive. Nothing in the original specification disclose that the application of heat and pressure causes the forming of a bulging out portion.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (JP-2002268577, previously cited) in view of Chung (6496373, previously cited), and further in view of Wei et al. (US 20020193035).

Kaneko et al. discloses a method of manufacturing a plasma display device having a panel in which a pair of substrates having transparency at least on a front side, the substrates being oppositely disposed so that discharge space and discharge cells are formed between the substrates, and a metallic holding plate 3 that supports the panel via a thermal conductive material (see the machine translation, [0002], [0006] and [0019]); the method comprising: forming a pull-to-remove type adhesive 50, which is thermally conductive in order to allow heat to travel from the panel to the chassis;

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applying the adhesive to one of the panel 1B and the holding plate 3 and bonding the panel to the holding plate together ([0023]).

Kaneko et al. is silent as to a method wherein heat and pressure are applied to each plate for forming a bulging-out portion of the adhesive and the adhesive is cured to bond the plates together. Chung teaches using a compressible and melt-flowable thermally conductive adhesive that is tacky and pressure sensitive for bonding two electronic components together. The adhesive is spread by application of heat and pressure to at least one plate being bonded (column 4, line 59 – column 5, line 40). Use of such an adhesive accommodates planarity tolerances between the substrates and thus forms a stronger bond by reducing voids in the joint (abstract, col. 2 lines 12-13 and 20-24 and col. 6 lines 26-35). The use of a flowable curable pressure sensitive adhesive would have additionally eliminated the need to clamp the components together. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method Kaneko such that a melt-flowable adhesive is used to bond the plates together wherein said melt-flowable adhesive is spread by application of heat and pressure as taught by Chung above as doing such achieves the advantages discussed above. In the method of Kaneko as modified by Chung, the application of heat and pressure will cause the flowable adhesive to forming a bulging out portion.

Kaneko and Chung are silent as to the formation of a groove at a periphery of the holding plate into which the adhesive flows. Wei discloses a method of manufacturing a display device, said method comprising providing a pair of transparent substrates 200, 204, wherein a groove 206 is formed at the periphery of at least one of said substrates,

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such that an adhesive 208 flows into said groove (figures 4, 5, 7a-7c; paragraphs 10-12; 20-27). Wei further discloses that the groove is positioned between the adhesive and an outer edge of the substrate, and the groove accepts the flowed portion of the adhesive to prevent it from leaking to the outside of the substrate (paragraphs 20-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a groove at the periphery of Kaneko's holding plate for a portion of the adhesive to flow into so that said portion can be prevented from hanging outside of said holding plate in order to control the flow of the adhesive and as taught by Wei above.

As to claim 19, Kaneko discloses pulling the bulging out portion (abstract, sections 0006-0014 of translation).

Response to Arguments

4. Applicant's arguments filed 07/28/2009 have been fully considered.

With respect to the applicant's arguments directed at Kaneko in section 3 of the Remarks, said arguments are moot in light of the examiners new grounds of rejection. The applicant argues that the melt flowable adhesive of Chung is not bulging out from the heat dissipating element and the fasteners. This argument is moot in light of the examiners new grounds of rejection. As discussed above, in the method of Kaneko as modified by Chung, the adhesive will flow out and form bulging out portions as heat and pressure is applied to the plates of Kaneko as modified above.

Applicant's arguments directed at Wei are not germane as the examiner never asserts that Wei discloses the forming of a bulging out portion.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER SCHATZ whose telephone number is 571-272-6038. The examiner can normally be reached on Monday through Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTOPHER SCHATZ/
Examiner, Art Unit 1791

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1791